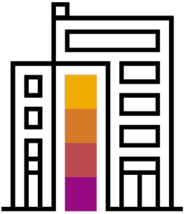




SAP® Innovation Awards 2020 Entry Pitch Deck

Leveraging Intelligent Technology for transforming FIN-Ops

Vodafone



Company Information

Headquarters	London, UK
Industry	Telecommunications
Web site	www.vodafone.com

Vodafone is a leader in technology communications through mobile, fixed, broadband and TV.

It has extensive experience in connectivity, convergence and the Internet of Things, as well as championing mobile financial services and digital transformation in emerging markets.

Since making the first mobile call in the UK on 1 January 1985, Vodafone has grown into an international business and one of the most valuable brands in the world. Vodafone has mobile operations in 24 countries, partners with mobile networks in 43 more, and provides fixed broadband in 19 markets.

As of 30 June 2019, Vodafone Group had approximately 640 million mobile customers, 21 million fixed broadband customers and 14 million TV customers, including all of the customers in Vodafone's joint ventures and associates.

Leveraging Intelligent Technology for transforming FIN-Ops

Vodafone



We have successfully used design thinking combined with cutting edge technology from SAP to partner together and shape the future of how we deliver finance. These are exciting times with plenty more opportunities to exploit together.

Paul Stephenson, Director of Finance Operations and Controls, Vodafone

Challenge

As a steppingstone in achieving full end-to-end finance operations automation, Vodafone wanted to validate whether artificial intelligence (AI) could be effectively used to reduce costly manual tasks in invoice processing. Besides affecting the overall efficiency, these tasks were error-prone, compromising data quality.

Solution

The company co-innovated with SAP to automatically recognize general ledger accounts and cost centers in scanned invoices, using an innovative machine learning–powered service developed on SAP Cloud Platform. The provided recommendations would then be used in SAP S/4HANA for carrying on the appropriate action.

Outcome

Vodafone's shared service center can now save up to 5 minutes per scanned invoice, achieving between 60 to 80% time-saving. Furthermore, the company has successfully demonstrated that AI can be a game-changer in finance operation automation, opening the door to broader adoption of AI across the organization.



**Up to
80%**

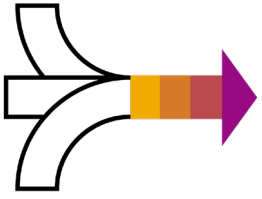
Time savings in
processing
scanned invoices

Reduced

Risk and capital
expenditures

Better

Outcomes and
data quality that
other processes
can leverage



Business Challenges and Objectives

Manual tasks were slowing down Vodafone invoice processing, and human errors resulted in poor data quality, creating problems downstream.

The company had achieved mixed results from its earlier attempts to leverage intelligent technology. It was challenging to identify the right technology solutions, as most of them required large software packages that overlapped with capabilities the company already had.

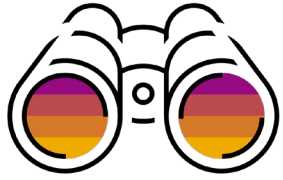
Also, Vodafone was concerned that new data-intensive innovation initiatives could interfere with core business operations. Furthermore, the costs and risks associated with adopting the new technology could have been substantial.

Vodafone is committed to innovating its finance operations to achieve end-to-end, fully automated processes.

Finding effective ways to leverage intelligent technologies eliminated tedious manual tasks, improved employee productivity, and increased business process efficiencies. This achievement was critical to the company's digital transformation and continuous business success.

Partnering with a vendor that could embrace the company's vision and co-innovate to invent practical solutions for reducing manual tasks was essential to Vodafone's modernization mission.





Project or Use Case Details

To achieve its objectives, Vodafone partnered with SAP to co-innovate on a POC that uses machine learning (ML) for extracting general ledger accounts and cost centers from scanned invoices, and then leverages the information in SAP S/4HANA .

Vodafone and SAP used the design thinking methodology to define the project. They decided to create a new ML service on SAP Cloud Platform to innovate freely without affecting normal business operations. Using a third-party solution, they also created a UI extension for EVO, the company's SAP S/4 HANA on-premises installation, to monitor and leverage the recommendations from the intelligent service.

To train and validate the machine learning model, the project used data from SAP S4/HANA that acted as the single source of truth. SAP Innovative Business Solutions (IBSO) designed and implemented the custom interface and the required automation routines on SAP S/4HANA.

Invoice Object Recommendation, the machine learning service successfully developed for Vodafone, became part of SAP Leonardo AI Business Services – one of SAP's standard offerings - on December 3rd, 2019.



Benefits and Outcomes

Business or Social

60 to 80% time-saving in processing data from scanned invoices

Proven thought leadership: co-innovation with SAP led to a tailored solution that became part of standard SAP offering

IT

Reduced risks and avoided steep capital investment with pay-as-you-go cloud-based implementations

Proved that AI can be successfully leveraged to accomplish Vodafone's process automation goals

Human Empowerment

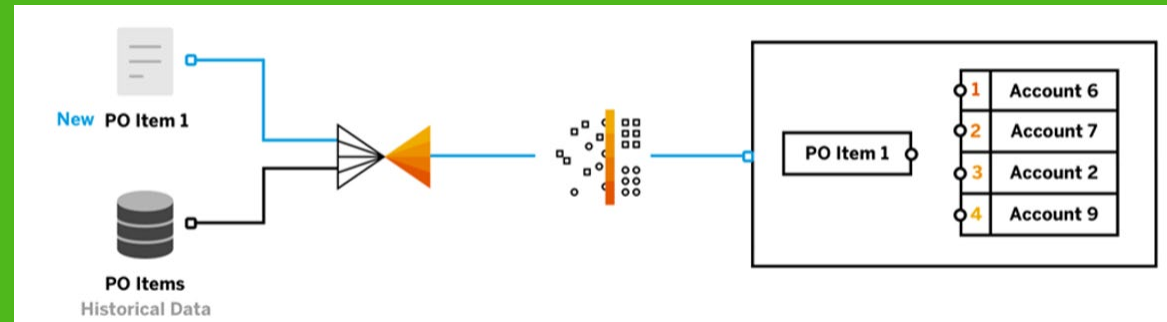
Business across the world can now take advantage of these innovations from Vodafone and SAP



Architecture

SAP Cloud Platform

SAP Leonardo AI Business Service



ML Service
“Invoice Object
Recommendation”

co-innovated by
Vodafone and
SAP Innovation Services

SAP S/4HANA

Custom API for training and inference
- designed and developed by
SAP Innovative Business Solutions

Cockpit UI

3rd Party Add-on



Deployment

Deployment status

POC

Date

March 2020

Number of users

150 named users

SAP technologies used:

	SAP product	Deployment status (live or proof of concept [POC])	Contribution to project
1	SAP Cloud Platform	POC	Extension platform
2	SAP S/4HANA 1809	LIVE	On-premises implantation at Vodafone
3	SAP Leonardo AI Business Services – Invoice Object Recommendation	POC	ML service to extract information from scanned invoices
4	SAP Innovative Business Solutions (IBSO)	POC	Implemented the client extension and custom APIs

5 If you have used one of the services or support offerings from SAP Digital Business Services during the implementation or deployment phase, please select with ☒ one or more of the following offerings:

- | | | |
|---|---|--|
| <input type="checkbox"/> SAP MaxAttention™ | <input type="checkbox"/> SAP ActiveAttention™ | <input type="checkbox"/> SAP Advanced Deployment |
| <input type="checkbox"/> SAP Value Assurance | <input type="checkbox"/> SAP Model Company | <input type="checkbox"/> Others: |
| <input checked="" type="checkbox"/> SAP Innovation Services | <input checked="" type="checkbox"/> SAP Innovative Business Solutions | |



Advanced Technologies

The following **advanced technologies** were part of the project.

	Technology or use case	Yes or No	Contribution to project
1	3D printing	No	
2	Blockchain	No	
3	Internet of Things (IoT)	No	
4	Machine learning or AI	Yes	Automatic determination of invoice related business objects
5	Conversational AI	No	
6	Robotic process automation	No	
7	Data anonymization	No	
8	Augmented analytics	No	